REMARKS

Claims 1-6 and 8 to 14 are rejected.

Claims 7 and 15-16 are cancelled.

Claims 1, 9, 10, 12 and 14 are amended with this response. A support for the amendment of these claims is among others found in the original set of claims.

Claim 1 of **data requesting device** integrates the features of previous claim 7 of "receiving means intended to receive special warning messages (..)" and of "maintenance means that are intended to trigger the sending of a normal state signal (..)". Claim 9 of **data requesting process** integrates the features of previous claim 7 as previously mentioned in terms of steps of the data requesting process. A support for the integration of the features of previous claim 7 related to a data requesting device of claim 1 into a data requesting process according to claim 9 can among others be found at page 2, lines 23-25: "*the invention also concerns a data requesting process (..) corresponding to that requesting device (..)*".

Claim 10 of **data transmitting device** integrates features of claim 12 of "said alarm means for producing a warning message (..)" and of "transfer means for sending said warning message (..)" and further integrates the feature of claim 7 of "receiving means receives a special warning messages (..)" in terms of means of the data transmitting device. Following the integration of the discussed features of claim 12 into claim 10, claim 12 is amended accordingly. A support for the integration of the mentioned feature of previous claim 7 related to a data requesting device into claim 10 of data transmitting device, can among others be found at page 5 lines 29-32: " *a receiving module intended to receive messages from the receiver 20, such messages may include notably (..) normal state signals (..)*" and at page 6, lines 18-20: *"(..) when the normal state signals are not received in due time, even after a warning message has been sent;"*. The cited passages show that the data transmitting

device receiving means are also used to receive the normal state signals that are sent in response to a warning message.

Claim 14 of **data transmitting process** integrates feature of claim 7 of reception of "a special warning message (..)" and of "sending of a normal state signal (..)" in terms of data transmission process steps, as "sending a special warning message (..)" and as "receiving of a normal state signal (..)". A support for the integration of features of claim 7 related to a data requesting device into claim 14 of data transmitting process can among others be found in the formulation of original claim 14, that mentions that "said data transmitting process being preferably intended to be executed by a data transmitting device compliant with any of claims 10 to 13"; the Applicants have already shown previously that data transmitting device receiving means are used to receive the normal state signals, including those that are sent in response to a warning message; page 6, lines 15-17 show that a transfer module 14 of a data transmitting device is used to send warning messages.

As a result, claims 1-6 and 8-14 are submitted in this response for reconsideration.

No new matter has been added.

Rejection of Claims 1-6 and 8-14 under 35 U.S.C. 103(a)

Claims 1-6 and 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US Patent No. 5, 822, 524) in view of Forecast et al. (US Patent No. 6,230,200).

Amended claim 1 integrates features of previous claim 7. With regard to these features, the Office Action asserts at page 8, paragraph "Regarding Claim 7" that Chen discloses data requesting device according to claim 1, wherein: said receiving means receives a special warning messages from the server via the first network when the server has not received the normal state signals in due time, and the maintenance means triggers the sending

of a normal state signal to the server via the second network as soon as the special warning message is received. The Office Action cites Chen, col. 6, lines 1-6: buffer manager manages the structure if data in packet buffer; should have enough data to minimize possibility of not having request data and have enough free space to receive new data packets.

The Applicants respectfully disagree that Chen and in particular col. 6 lines 1-6 discloses the features of previous claim 7 that are now integrated into amended claim 1. The cited passage of Chen is in full:

> *"FIG. 3 describes in detail the structure of the packet buffer (33). As to the amount of data, ideally the packet buffer (33) should have enough data: (i) to minimize the possibility of not having the requested data, and (ii) still have enough free buffer space (memory space) to receive new data packets."*

The passage from Chen merely describes the ideal amount of data in the packet buffer 33 of a client agent. In no way, Chen discloses or suggests that: "said receiving means receives a special warning message from said server via said first network when said receiver has not received said normal state signals in due time, and said maintenance means triggering a sending of a normal state signal to said server via said second network as soon as said at least one special warning message is received".

At least the discussed features are also not disclosed by Forecast. Forecast merely describes reception of heartbeats from stream servers by a master controller (col 52, lines 37-40); and if the master controller fails to receive a stream server heartbeat within a time-out period, logging of the error in a master controller's cache and initiation of stream server recovery (col. 52, lines 48-50). At page 3, paragraph 2.4 of the Office Action, it is asserted that Forecast discloses the feature of "said receiving means to receive special warning messages from said server via said first network when said server has not received said

normal state signals in due time", citing Forecast col. 52 lines 40-46; col. 55 lines 64-col. 56 line 8.

The Applicants respectfully disagree.

The message of Forecast does not disclose the warning message of the invention as claimed by claim 1. The Office Action cites Forecast, col. 55, l. 64 – col. 56, l. 8: "controller send a message". The Applicants submit that the message sent by the controller of Forecast according to col. 55, l. 64 – col. 56, l. 8 does not disclose the warning message of claim 1. Rather, the message of Forecast cited by the Office Action is a message that indicates a termination of a stream, informing the client with the de facto situation that streaming has been terminated. See col. 55 line 66 – col. 56 line 1: "*Next, in step 563, the master controller sends* ***a message*** *to the stream's client* ***informing the client that the stream has been terminated.***" Upon reception of this **stream termination message** the master controller checks whether the client has sent a failover request (col. 56 lines 1-3), and if so, the master controller re-establishes the stream on a specified port (col. 56 lines 3-5). The message of Forecast is thus a **disconnection** message informing the client of an interruption of the stream, upon which the client can restore the stream by sending a request. By contrast, the message of the invention is a **warning** message, not informing the client of an interruption of a stream but rather informing a client that the stream server did not receive a normal state message from the client in due time, which would indicate to the stream server that connection with the client is lost; reception of such a message leaves a client according to the invention with the possibility to send a late normal state message, informing the stream server that the state of the client is normal. There is thus no interruption of streaming. In other words, while Forecast's message indicates to a client: "you are informed that the affected stream is terminated", which leaves the client with the only possibility to request re-

establishment of the affected stream, the message of the invention says nothing about interruption of an affected stream but rather indicates to a client "I did not hear from you lately; please reply", upon which the client can reply with a message "I'm OK".

The Office Action further arguments that the master controller of Forecast checks whether or not a time limit has been exceeded for a response from the client; if not alarm state. The Applicants respectfully disagree that this discloses any features of the invention, and submits that the argumentation is based on piecemeal analysis. Forecast merely mentions that a master controller checks whether or not a time limit has been exceeded for a response from the client and if not, it enters the alarm state; the said checking is done upon awaiting a response on the disconnection message; the checking is thus done **after** the sending of the **disconnection** message. See col. 55 line 66 –col. 56 line 8:

> "*Next, in step 563, the master controller sends a message to the stream's client informing the client that the stream has been terminated. Then, in step 564, the master controller checks whether a failover request has been received from the client. (..) If not, execution continues to step 566. In step 566, the master controller server checks whether or not a time limit has been exceeded for a response from the client.*"

However, according to the invention, when a server has not received normal state signals in due time, it sends a warning message. Verification by a server if it has received normal state messages in due time according to the invention is thus done **before** sending of the **warning** message. The reasoning of the Office Action to show that the discussed feature of claim 1 is disclosed by Forecast is thus not grounded.

Thus, as has been shown, neither Chen nor Forecast disclose at least the features of claim 1 of said receiving means receives a special warning message from said server via said first network when said server has not received said normal state signals in due time, and said maintenance means triggering a sending of a normal state signal to said server via said second network when said at least one special warning message is received.

At least the discussed features are also not obvious through a combination of Chen with Forecast. Chen discusses regulation of a server's streaming rate via surveillance of reception buffer watermarks and transmission of regulation commands to the server as a function of the surveillance. Forecast discusses regular transmission of a heartbeat from stream servers to a master controller where each stream server indicates a current stream position, a stream state (pause, playing, completed) and a failure type code.

Adding teachings of Chen to Forecast would add to Forecast a feature of regulation of streaming rate to avoid receiver over- or underflow. This could be useful to ensure that a stream is sent in a transmission rate that allows a receiver to correctly render the stream without artefacts due to reception buffer under- or overflow.

Adding teachings of Forecast to Chen would add to Chen a feature of surveillance of one or more streaming servers by a master controller unit; this could be useful to make the streaming servers more robust against failure.

Thus, the combination of Chen and Forecast would not have lead the skilled in the art to realize the invention.

Then, the feature would not have been obvious for the skilled in the art and the Applicants submit that claim 1 is in condition for allowance for at least the above mentioned reasons.

Claims 2-6 and 8, being dependent from claim 1, include by reference all of the limitations of claim 1. It is therefore believed that they are also in condition for allowance.

As mentioned, amended claim 9 of data requesting process integrates the features of previous claim 7 as previously mentioned in terms of steps of the data requesting process. For at least the aforementioned reasons for the similar discussed limitations of claim 1, the Applicant submits that claim 9 is also in condition for allowance.

Amended claim 10 of data transmitting device comprises features of "said alarm means producing a warning message when said normal state signals are not received in due time" and "transfer means for sending said warning message to said at least one data requesting device via said first network" and of "said receiving means receiving a normal state signal from said at least one data requesting device when said at least one warning message is received by said at least one data requesting device". At least these features are not disclosed nor suggested by Chen. Chen merely describes regulation of the server's transmission rate based on an amount of data in a client's packet buffer, where the client's agent changes the server's transmission mode by sending commands to the server (col.6, lines 1-55). In no way, Chen describes or suggests that a data transmitting device comprises "said alarm means producing a warning message when said normal state signals are not received in due time" and "transfer means for sending said warning message to said at least one data requesting device via said first network" and of "said receiving means receiving a normal state signal from said at least one data requesting device when said at least one warning message is received by said at least one data requesting device". At least these features are also not disclosed nor suggested by Forecast. Forecast merely describes transmission of heartbeats from stream servers (col 52, lines 37-40); and if there has been a failure to receive a stream server heartbeat within a time-out period, logging of the error in a

master controller's cache and initiation of stream server recovery (col. 52, lines 48-50). In no way, Forecast describes or suggests that a data transmitting device comprises "said alarm means producing a warning message when said normal state signals are not received in due time" and "transfer means for sending said warning message to said at least one data requesting device via said first network" and of "said receiving means receiving a normal state signal from said at least one data requesting device when said at least one warning message is received by said at least one data requesting device".

At least the discussed features are also not obvious through a combination of Chen with Forecast. Chen discusses regulation of a server's streaming rate via surveillance of reception buffer watermarks and transmission of regulation commands to the server as a function of the surveillance. Forecast discusses regular transmission of a heartbeat from stream servers to a master controller where each stream server indicates a current stream position, a stream state (pause, playing, completed) and a failure type code.

Adding teachings of Chen to Forecast would add to Forecast a feature of regulation of streaming rate to avoid receiver over- or underflow. This could be useful to ensure that a stream is sent in a transmission rate that allows a receiver to correctly render the stream without artefacts due to reception buffer under- or overflow.

Adding teachings of Forecast to Chen would add to Chen a feature of surveillance of one or more streaming servers by a master controller unit; this could be useful to make the streaming servers more robust against failure.

Thus, the combination of Chen and Forecast would not have lead the skilled in the art to realize the invention.

Then, the feature would not have been obvious for the skilled in the art and the Applicants submit that claim 10 is in condition for allowance for at least the above mentioned reasons.

Claims 11 and 12, being dependent from claim 10, include all of the limitations of claim 10. It is therefore believed that claims 11 and 12 are also in condition for allowance.

Claim 13, being dependent from claim 9, includes all of the limitations of claim 9. It is therefore believed that claim 13 is also in condition for allowance.

As mentioned, amended claim 14 of data transmitting process integrates the features of previous claim 7 as previously mentioned in terms of data transmission process steps. For at least the aforementioned reasons for the similar discussed limitations of claim 1, the Applicant submits that claim 14 is also in condition for allowance.

In view of the above remarks and amendments to the claims it is respectfully submitted that this rejection is satisfied and should be withdrawn.

Having fully addressed the Examiner's rejections, it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney so that a mutually convenient date and time for a telephonic interview may be scheduled.

Respectfully submitted,
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